ECOLOGICAL ENGINEERING SYSTEMS, INC.

IBLA 86-1615 Decided September 1, 1988

Appeal from a decision of the Wyoming State Office, Bureau of Land Management, rejecting noncompetitive oil and gas lease offer in part. W-96887.

Affirmed in part, reversed in part and remanded.

1. Oil and Gas Leases: Known Geologic Structure--Oil and Gas Leases: Offers to Lease

   A noncompetitive oil and gas lease offeror who challenges a determination that certain lands are within the known geologic structure of a producing oil or gas field has the burden of establishing that the determination is in error. The determination will not be disturbed in the absence of a showing of error by a preponderance of the evidence.

2. Oil and Gas Leases: Known Geologic Structure--Oil and Gas Leases: Offers to Lease

   BLM properly rejects a noncompetitive oil and gas lease offer for land determined to be within the known geologic structure of a producing oil or gas field only to the extent of the smallest legal subdivision crossed by the exterior boundary of the producing structure, represented by a zero foot isopach.

APPEARANCES: W. L. Stonehocker, Senior Vice President, Ecological Engineering Systems, Inc., for appellant; Lowell L. Madsen, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Denver, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE HARRIS

Ecological Engineering Systems, Inc. (EES), has appealed from a deci-sion of the Wyoming State Office, Bureau of Land Management (BLM), dated July 30, 1986, rejecting its noncompetitive oil and gas lease offer, W-96887, in part.

By notice dated November 15, 1985, BLM informed EES that its simultaneous oil and gas lease application had been drawn with priority for parcel No. WY-186 in a simultaneous oil and gas lease drawing and required EES to execute and return copies of a lease offer, along with an attached stipulation, within 30 days of receipt of the notice. On November 27, 1985, EES filed executed copies of lease offer W-96887 and the attached stipulation with BLM. The lease offer encompassed 360 acres of land situated in the E\ NW^ sec. 24 and the S\ NW^, NE^ SW^, S\ S\ sec. 25, T. 46 N., R. 72 W., sixth principal meridian, Campbell County, Wyoming.

By memorandum dated July 23, 1986, the District Manager, Casper District Office, informed the State Director that 80 acres of land in EES' lease offer, described as the E\ NW^ sec. 24, T. 46 N., R. 72 W., sixth principal meridian, Campbell County, Wyoming, had been determined to be within the Hilight known geologic structure (KGS), effective July 3, 1986. In its July 1986 decision, BLM rejected EES' noncompetitive oil and gas lease offer as to the 80 acres of land in the E\ NW^ sec. 24 because the land was situated within a KGS and could only be leased by competitive bidding. Effective August 1, 1986, BLM issued a noncompetitive oil and gas lease as to the remainder of the land in EES' lease offer. EES has appealed from BLM's July 1986 decision.

The record indicates that the land encompassed by appellant's lease offer was included within an addition to the Hilight KGS based on a July 3, 1986, report (Report), prepared by a BLM petroleum geologist. The Report states that the addition to the KGS was based on mapping of the "B" sand horizon of the Muddy formation and the upper Minnelusa formation, 1/ and that the Muddy formation was productive at various locations while the upper Minnelusa formation had been found to be productive at Amoco Production's Pickrel Nos. l and 2 wells, situated, respectively, in the SW^ SE^ and the SE^ NW^ sec. 2, T. 46 N., R. 72 W., sixth principal meridian, Wyoming (Report at l). The Report concluded:

> This KGS boundary is a composite based primarily on the Muddy B sand reservoir limits. However, about 240 acres were added based on that portion of Minnelusa which extended outside the boundary of the Muddy B sand reservoir. All 160 acre subdivisions cut by the zero foot line of the Muddy B sand isopach were placed within the KGS.

1/ The Report states that the "B" sand horizon of the Muddy formation is an "offshore marine sandbar complex," while the Minnelusa formation is an "eolian sand dune complex which was deposited on the margins of a shallow sea" (Report at l). The Minnelusa formation, the Report further states, is characterized by "small, ellipsoidal shaped reservoirs which are typically terminated by porosity pinchout, facies changes, oil-water contacts or truncation of the sand body by Pre-Opeche erosion and subsequent infilling by Opeche Shale." Id.

In its statement of reasons for appeal (SOR), appellant challenges only BLM's designation of the E\ NW^ sec. 24 as part of the Hilight KGS. Appellant contends that there is no firm evidence that the subject land contains nearby productive sand in the Muddy formation, but that, rather, the fact that the land "lies on strike with 2 dry holes, and downdip from a producing well" indicates that there is a narrowing of the productive sand near the subject land (SOR at l). Appellant submits its own mapping of the productive sand of the Muddy formation, which indicates that the subject land is west and south of the zero foot isopach of the productive sand of the Muddy formation, just outside the productive limits of that formation.

[1] One challenging a KGS determination has the burden of establishing by a preponderance of the evidence that BLM's inclusion of the land in the KGS was erroneous. Bender v. Clark, 744 F.2d 1424 (10th Cir. 1984). 2/ In attempting to satisfy that burden, an appellant must be cognizant of what is meant by the term "KGS", which is defined by the Department as the "trap in which an accumulation of oil or gas has been discovered by drilling and determined to be productive, the limits of which include all acreage that is presumptively productive." 43 CFR 3100.0-5(l) (emphasis added). 3/ While there must be a determination that a structural or stratigraphic trap exists which contains oil or gas, usually by completion of a producing well, the

2/ In its answer to appellant's SOR, BLM contends that the appropriate standard of review of a KGS determination where no hearing was held is not whether the preponderance of the evidence establishes error, but whether the determination was arbitrary, capricious, or not supported by a rational basis. As BLM points out, the Board adopted the preponderance of the evidence standard following the decision of the Tenth Circuit Court of Appeals, in Bender v. Clark, supra. BLM particularly seizes on the language in Bender to the effect that the preponderance of the evidence standard is appropriate in reviewing KGS determinations "when the Department of Interior elects to conduct an informal hearing." Id. at 1430. We recognize that Bender involved Board review of a KGS determination which had been referred for a hearing before an Administrative Law Judge. Nevertheless, in order to conform Board review generally to the principle announced in Bender, we have not given that case the narrow reading requested by BLM. Rather, we have applied that standard of review in a number of types of cases, particularly cases involving disputed factual issues. See, e.g., Peter Paul Groth, 99 IBLA 104, 111 (1987); United States v. Estabrook, 94 IBLA 38, 52 (1986); Woods Petroleum Co., 86 IBLA 46, 50-51 (1985). Moreover, the standard has been applied whether or not a hearing was held. Michael Shearn, 96 IBLA 13 (1987); California Energy Co. (On Reconsideration), 85 IBLA 254, 92 I.D. 125 (1985) (both cases involving rejection of high bids for competitive leases). Therefore, we decline to adopt the standard of review urged by BLM.

3/ Upon passage of the Federal Onshore Oil and Gas Leasing Reform Act of 1987, P.L. 100-203, 101 Stat. 1330-259, this concept was deleted from 30 U.S.C. | 226 (1982). Oil and gas lease applications and offers pending on Dec. 22, 1987, were, however, to be processed and leases issued under the provisions of the Act of Feb. 25, 1920, as in effect before its amendment by P.L. 100-203.

limits of a KGS are not simply the immediate area around that well, but all land where geologic or other evidence indicates that there is a reasonable probability that the land is underlain by the trap or a series of related traps in the same formation(s). Such land is considered presumptively productive because of its inclusion in a KGS. Thunderbird Oil Corp., 91 IBLA 195, 202-03 (1986), aff'd, Planet Corp. v. Hodel, Civ. No. 86-679 HB (D.N.M. May 6, 1987); B. K. Killion, 90 IBLA 378 (1986); Angelina Holly Corp., 70 IBLA 294 (1983), aff'd, Angelina Holly Corp. v. Clark, 587 F. Supp. 1152 (D.D.C. 1984).

BLM ran the zero foot isopach of the "B" sand horizon of the Muddy formation from just west of a well situated in the SW^ sec. 13, T. 46 N., R. 72 W., sixth principal meridian, Wyoming, almost directly southeast to just east of a well situated in the NE^ sec. 24, T. 46 N., R. 72 W., sixth principal meridian, Wyoming. Both wells were dry holes. 4/ That zero foot isopach crosses the northeast corner of the land in question. Appellant, however, runs this same section of the zero foot isopach so that it just skirts the northeast corner of the E\ NW^ sec. 24. There is no other control well in the vicinity. It is clear that the proper placement of the zero foot isopach as between the two wells is a matter of interpretation. 5/ BLM rendered its opinion, and appellant has offered its opinion based on the same evidence. In such circumstances, we have held that the appellant's opinion is not sufficient to establish error in BLM's KGS determination. B. K. Killion, supra at 386. We do so in this case also.

4/ Those are apparently the two wells referred to by appellant in its SOR. As noted infra, appellant and BLM have a difference of opinion regarding the "strike" of the zero foot isopach between those wells (SOR at l). The producing well referenced by appellant in its SOR is apparently a well situated in the SE^ sec. 13, T. 46 N., R. 72 W., sixth principal meridian, Wyoming. That well is updip of the subject land and has little or no bearing on the placement of the relevant part of the zero foot isopach.

5/ In a Sept. 18, 1986, response to appellant's SOR, attached to BLM's answer (Exh. l at l), a BLM geologist states:

"The appellant implies that our interpretation is not valid because it contradicts well control (data points) which suggest a narrowing of the sand between fields. This is a viewpoint of the appellant which is based on their interpretation and representation of the data. To them it appears reasonable to map an exaggerated narrowing of the Muddy Sand in the vicinity of the subject tract. Indeed, this is a reasonable interpretation; our own geologic mapping clearly demonstrates a minor narrowing and thinning of the Muddy Sand in the vicinity of the tract in question. Our interpretation does not, as the appellant states, contradict well control (data points) but simply varies by degree, as an interpretation, from the map which was prepared by the appellant. In short, our mapping is a reasonable and supportable interpretation based on sound, commonly accepted mapping practices and does not violate or contradict data points."
(Emphasis in original.)

[2] Nevertheless, it is clear from the map submitted by BLM delineating the location of the zero foot isopach that this isopach crosses only the NE^ NW^ sec. 24. In Pamela S. Crocker-Davis, 94 IBLA 328, 331-32 (1986), we concluded that BLM should include in a KGS only the smallest legal subdivision (quarter quarter section) traversed by the exterior boundary of the structural or stratigraphic trap. In this case, that boundary is represented by the zero foot isopach. Accordingly, it was improper for BLM to include the SE^ NW^ sec. 24 in the addition to the KGS. See Kathleen M. Blake, 96 IBLA 61, 75-76 (1987). That land must be considered available for leasing to appellant, all else being regular. To this extent, we reverse the July 1986 BLM decision. To the extent BLM's rejection of appellant's lease offer related to land in the NE^ NW^ sec. 24, we affirm.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.l, the decision appealed from is affirmed in part and reversed in part and the case is remanded.

Bruce R. Harris
Administrative Judge

I concur:

Franklin D. Arness
Administrative Judge